Main Channel Bridge
Spanning the Main Channel of the Clark Fork
Thompson Falls
Sanders County
Montana

HAER No. MT-28

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D.C. 20240

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HISTORIC AMERICAN ENGINEERING RECORD

Main Channel Bridge

MT-28

Location: Spanning the Main Channel of the Clark Fork on the south edge of Thompson Falls, Sanders County, Montana.

Date of Construction: 1911

Present Owner: Sanders County
Sanders County Courthouse
Thompson Falls, Montana 59873

Present Use: Closed to traffic

Significance: In November of 1909, the Sanders County Commissioners were informed by the Northwestern Development Company of plans to build a hydro-electric generating facility at Thompson Falls. In July 1910, the Commissioners made plans to build bridges across the Clark Fork at Plains, Thompson Falls, and Trout Creek. Almost certainly the Thompson Falls bridge plans took the power plant plans into consideration because one of the two bridges built (the Dry Channel Bridge) was built above the water level of the reservoir. The Thompson Falls bridge plans actually called for two bridges: the Dry Channel Bridge from the north or town side of the river to a small island and the Main Channel Bridge from the island to the south side of the river. The County Commissioners retained William Pierce Cowles, an engineer from Minneapolis, to draw up plans and specifications and to supervise construction for all three (or four, if the Thompson Falls bridges are counted as two) bridges in the county. Bids were called and O.E. Peppard of Missoula won the contract to construct all three bridges for $125,650. They were built in 1911. The Main Channel bridge is an eight-span bridge built several hundred yards below the main channel dam. The spans are arranged in the following order from the island: a 55-foot, three-panel, Parker deck truss with inclined end-posts only at the north end, allowing the span to be supported at the upper chord on a concrete abutment at the north end and at the lower chord on a concrete pier at the south end; a 160-foot, nine-panel Pratt deck

truss, two 127-foot, seven-panel Pratt deck trusses; a 65-foot, four-panel Pratt deck truss which appers to be a standard Pratt pony modified for use as a deck truss; and three 18-foot wood stringer spans supported by wood pile bents. All of the Pratt deck spans are of steel, are pin-connected, and are supported by concrete piers. There are a number of unusual features to the bridge. There is a bend in the deck at the junction of the four-panel and seven-panel trusses, and this was accomplished by designing the end panel of the eastern truss to be longer than that of the western truss of the four-panel span. The trusses of this four-panel span are not as deep as those of the other spans. Therefore, the four-panel span is pin-connected to four columns (each is comprised of two laced channels) which extend upward from the concrete piers to the deck. This means there is no allowance for expansion and contraction of four-panel span. Another unusual feature of the bridge is the difference between the two seven-panel spans. They are identical except that the lower chord of the southern span are eyebars while the lower chord of the northern span (and the nine-panel span) are two laced channels. Otherwise, the steel spans are typical Pratt steel trusses: verticals are two laced channels, except the hip verticals which are two angles with battens; diagonals are eyebars with turnbuckles; the upper chord is two laced channels. Wood stringers sit on the top flange of steel I-beam floor beams which sit atop the upper chord. The deck is of wooden 2x4's on edge with an asphalt topping. The bridge has been closed to all traffic because some of the deck has rotted and there are several large holes in the deck.

Transmitted by: Kevin Murphy, Historian HAER, 1984; from data compiled by Fredric L. Quivik, 1979

ADDENDUM TO
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of the Clark Fork
Thompson Falls
Sanders County
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